

## MODULE DESCRIPTOR

### Module Title

Forensic Toxicology And Substances Of Abuse

Reference	PL3605	Version	1
Created	October 2023	SCQF Level	SCQF 9
Approved	June 2002	SCQF Points	15
Amended	August 2021	ECTS Points	7.5

### Aims of Module

To allow students the opportunity to display a critical evaluation of evidence, forensic analysis and an application of knowledge gained in toxicological absorption, distribution, metabolism and excretion. In addition to allow students to explore both theoretically and practically with the use of case studies, the legislation surrounding substances of abuse and the analytical procedures within drug abuse analysis, interpretation and presentation of expert evidence.

### Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Discuss the framework within which forensic toxicologists and forensic drug analysts work.
- 2 Demonstrate problem solving skills in the principles and methodologies used in drug analysis and toxicological investigations.
- 3 Interpret analytical results obtained from drug analysis and toxicological investigations.

### Indicative Module Content

Definition of poisons and poisoning; study of the time-dose relationship and route of administration; distribution, phase 1 and phase 2 metabolism and elimination. Specimens available and instrumental analysis, e.g. chromatographic and spectrophotometric; case studies interpretation of results and pharmacokinetics; report writing. Substances of abuse; legislation classification, interpretation, sampling, presentation, expert evidence screening and confirmation analysis. This module aligns with United Nations Sustainable Development Goal 16: Peace, Justice and Strong Institutions and Goal 3 Good Health and Well-being. Students learn about the interpretation of evidence contributing towards a fair judicial system and strong institutions and develop analytical skills in the analysis and identification of substances including drugs and toxins, and consider the impact of these substances on the human body.

**Module Delivery**

This is a lecture based module supplemented by tutorials, practical workshops and case studies. External forensic toxicologists and forensic practitioners/ laboratory scientists may be involved in the delivery of material.

**Indicative Student Workload**

	Full Time	Part Time
Contact Hours	40	N/A
Non-Contact Hours	110	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

**ASSESSMENT PLAN**

If a major/minor model is used and box is ticked, % weightings below are indicative only.

**Component 1**

Type:	Coursework	Weighting:	100%	Outcomes Assessed:	1, 2, 3
Description:	A written portfolio				

**MODULE PERFORMANCE DESCRIPTOR****Explanatory Text**

Component 1 (Written portfolio) comprises 100%. A minimum of a Grade D is required to pass the module.

Module Grade	Minimum Requirements to achieve Module Grade:
<b>A</b>	A
<b>B</b>	B
<b>C</b>	C
<b>D</b>	D
<b>E</b>	E
<b>F</b>	F
<b>NS</b>	Non-submission of work by published deadline or non-attendance for examination

**Module Requirements**

Prerequisites for Module	Successful completion of Stage 2 Forensic and Analytical Science or equivalent.
Corequisites for module	None.
Precluded Modules	None.

**INDICATIVE BIBLIOGRAPHY**

- 1 FENTON, J.J. *Toxicology, A Case Oriented Approach*. Current Edition. CRC Press.
- 2 DAVIES, S., JOHNSTON, A. and HOLT, D. *Forensic Toxicology: Drug use and misuse*. Current Edition. RSC Publications.
- 3 KING, L. *Forensic chemistry of substance misuse: a guide to drug control*. Current Edition. The Royal Society of Chemistry.
- 4 COLE, M.D. *The Analysis of Controlled Substances*. Current Edition. Wiley.
- 5 NEGRUSZ, A., AND COOPER, G. *Clarke's Analytical Forensic Toxicology*. Current Edition. Pharmaceutical Press.